

We claim:

1. A method for dynamically adjusting the bandwidth utilized by a connection in a network, said method comprising the steps of:  
5        selecting an encoding scheme for said connection during a call set-up phase;  
monitoring one or more conditions on said network during said connection; and  
selecting a new encoding scheme for said connection if one or more conditions  
have occurred.

10 2. The method of claim 1, wherein said predefined condition is a predefined network traffic level.

15 3. The method of claim 2, wherein an encoding standard that provides a lower degree of compression is selected at times of lighter network traffic.

4. The method of claim 2, wherein an encoding standard that provides a higher degree of compression is selected as network traffic increases.

20 5. The method of claim 1, wherein said predefined condition is a predefined network error characteristic and an encoding scheme is selected that performs well under the observed network error characteristic.

25 6. The method of claim 1, wherein said predefined condition is a predefined time period.

7. The method of claim 1, wherein an encoding scheme is independently selected for each half-circuit associated with said connection.

8. The method of claim 1, further comprising the step of notifying at least one of the devices associated with a connection of said change in the encoding scheme.

9. The method of claim 8, further comprising the step of inserting a notification in a 5 packet header indicating that subsequent packets will be encoded with a different specified encoding algorithm.

10. A system for dynamically adjusting the bandwidth utilized by a connection in a network, said system comprising the steps of:

10 a memory for storing computer-readable code; and  
a processor operatively coupled to said memory, said processor configured to:  
15 select an encoding scheme for said connection during a call set-up phase;  
monitor one or more conditions on said network during said connection; and  
select a new encoding scheme for said connection if one or more conditions have  
occurred.

11. The system of claim 10, wherein said predefined condition is a predefined network traffic level.

12. The system of claim 11, wherein an encoding standard that provides a lower degree of compression is selected at times of lighter network traffic.

13. The system of claim 11, wherein an encoding standard that provides a higher degree of compression is selected as network traffic increases.

25 14. The system of claim 10, wherein said predefined condition is a predefined network error characteristic and an encoding scheme is selected that performs well under the observed network error characteristic.

15. The system of claim 10, wherein said predefined condition is a predefined time period.

16. The system of claim 10, wherein an encoding scheme is independently selected 5 for each half-circuit associated with said connection.

17. The system of claim 10, wherein said processor is further configured to notify at least one of the devices associated with a connection of said change in the encoding scheme.

10 18. The system of claim 17, wherein said processor is further configured to insert a notification in a packet header indicating that subsequent packets will be encoded with a different specified encoding algorithm.

19. A method for dynamically adjusting the bandwidth utilized by a connection in a network, said method comprising the steps of:

15 receiving an encoding scheme indication for said connection during a call set-up phase;

monitoring for an indication of a new encoding scheme for said connection; and

20 decoding subsequent data with said new encoding scheme if said monitoring step detects a change in said encoding scheme.

20. The method of claim 19, wherein said indication is received if a network traffic level exceeds a predefined threshold.

25 21. The method of claim 20, wherein an encoding standard that provides a lower degree of compression is selected at times of lighter network traffic.

22. The method of claim 20, wherein an encoding standard that provides a higher degree of compression is selected as network traffic increases.

23. The method of claim 19, wherein said indication is received if a predefined network error characteristic is detected and an encoding scheme is selected that performs well under the observed network error characteristic.

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24. The method of claim 19, wherein said indication is received for a predefined time period.

25. The method of claim 19, wherein an encoding scheme is independently selected  
10 for each half-circuit associated with said connection.

26. The method of claim 25, wherein said monitoring step evaluates a packet header  
15 for a notification indicating that subsequent packets will be encoded with a different specified  
encoding algorithm.

27. A system for dynamically adjusting the bandwidth utilized by a connection in a  
20 network, said system comprising the steps of:

25 a memory for storing computer-readable code; and  
a processor operatively coupled to said memory, said processor configured to:  
receive an encoding scheme indication for said connection during a call set-up  
phase;  
monitor for an indication of a new encoding scheme for said connection; and  
decode subsequent data with said new encoding scheme if said monitoring step  
detects a change in said encoding scheme.

28. The system of claim 27, wherein said indication is received if a network traffic  
level exceeds a predefined threshold.

29. The system of claim 28, wherein an encoding standard that provides a lower degree of compression is selected at times of lighter network traffic.

30. The system of claim 28, wherein an encoding standard that provides a higher 5 degree of compression is selected as network traffic increases.

31. The system of claim 27, wherein said indication is received if a predefined network error characteristic is detected.

10 32. The system of claim 27, wherein said indication is received for a predefined time period.

33. The system of claim 27, wherein an encoding scheme is independently selected for each half-circuit associated with said connection.

15 34. The system of claim 27, wherein said monitoring step evaluates a packet header for a notification indicating that subsequent packets will be encoded with a different specified encoding algorithm.

20 35. A method for encoding a connection between a calling party and an application in a network, said system comprising the steps of:

establishing said connection, wherein said connection has a plurality of segments, each of said segments having a different encoding requirement; and

25 selecting an encoding scheme for each of said segments based on said corresponding encoding requirement

36. The method of claim 35, further comprising the step of adjusting the encoding scheme selected for one or more of said segments over time in response to the current needs of a given transaction being performed by said application.

37. The method of claim 35, wherein said application is a voice mail application and said selected encoding scheme is selected to record messages in a compressed format.

5 38. The method of claim 35, wherein said application is an interactive voice response (IVR) application and said selected encoding scheme provides improved quality for the calling party to IVR half-circuit when the IVR is performing speech recognition.

10 39. The method of claim 35, wherein said application is an interactive voice response (IVR) application and said selected encoding scheme provides higher compression for the calling party to IVR half-circuit when the IVR is recording a message.

15 40. The method of claim 35, wherein said application is a signal processing application and a new encoding scheme is selected for an adjustment to the volume of said connection.

20 41. The method of claim 35, wherein said application is a signal processing application and a new encoding scheme is selected for adjustment to the speed of said connection.